REMARKS

Claims 1, 4, 11-15, 17, 20-22, 24-26, 31, 33, 34, 37, 38, and 41-44 have been canceled without prejudice or disclaimer. Claims 45-62 have been added and therefore are pending in the present application. Claims 45-62 are supported throughout the specification, including the original claims.

The specification has been amended to add a Cross-Reference to Related Applications section.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

I. The Rejection of Claims 1, 4, 11-15, and 41 under 35 U.S.C. 102

Claims 1, 4, 11-15, and 41 are rejected under 35 U.S.C. 102(e) as anticipated by Grinko (US 2004/0253696). This rejection is respectfully traversed.

Grinko discloses a process for producing a fermentation product in a fermentation medium which comprises a fatty acid oxidizing enzyme. Grinko further discloses in paragraph [22] that the fermentation process may be used in combination with liquefaction and/or saccharification with additional enzymes such as an alpha-amylase. In paragraph [0046], Grinko discloses that one or more additional enzymes may be used in combination with (such prior to, during or following) the fatty acid oxidizing enzyme treatment.

Significantly, however, Grinko does not disclose the use of an alpha-amylase and a maltogenic alpha-amylase to liquefy a starch-containing material.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 102. Applicants respectfully request reconsideration and withdrawal of the rejection.

II. The Rejection of Claims 1, 4, 12, 13, and 41 under 35 U.S.C. 102

Claims 1, 4, 12, 13, and 41 are rejected under 35 U.S.C. 102(b) as anticipated by Veit et al. (WO 02/38787) and Olsen et al. (WO 02/074895). This rejection is respectfully traversed.

Veit et al. disclose a process for producing ethanol comprising liquefaction of a starch-containing material in the presence of an alpha-amylase; jet cooking; and liquefaction in the presence of a thermostable acid alpha-amylase or a thermostable maltogenic acid alpha-amylase (see page 1, lines 24-28).

Olsen et al. disclose a process for producing a fermentation product, comprising fermentation in the presence a carbohydrate-source generating enzyme, alpha-amylase, protease,

and debranching enzyme. Olsen et al. further disclose that the process may include liquefaction with alpha-amylase.

Significantly, however, Veit et al. and Olsen et al. do not disclose the use of an alpha-amylase and a maltogenic alpha-amylase to liquefy a starch-containing material.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 102. Applicants respectfully request reconsideration and withdrawal of the rejection.

III. The Rejection of Claims 1, 4, 11-15, and 41 under 35 U.S.C. 103

Claims 1, 4, 11-15, and 41 are rejected under 35 U.S.C. 103 as being obvious over Veit et al. (WO 02/08787) and Olsen et al. (WO 02/074895) in view of Grinko (US 2004/0253696). This rejection is respectfully traversed.

As explained above, Veit et al., Olsen et al., and Grinko do not teach or suggest the use of an alpha-amylase and a maltogenic alpha-amylase to liquefy a starch-containing material.

Moreover, as explained in Example 1, the use of both an alpha-amylase and a maltogenic alpha-amylase showed less retrograded starch and less viscosity compared to the use of the alpha-amylase alone. Since these results are not predicted by the prior art, they are surprising and unexpected.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 103. Applicants respectfully request reconsideration and withdrawal of the rejection.

IV. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

All required fees were charged to Novozymes North America, Inc.'s Deposit Account No. 50-1701 at the time of electronic filing. The USPTO is authorized to charge this Deposit Account should any additional fees be due.

Respectfully submitted,

Date: November 1, 2010

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